

1 **ABSTRACT**

2 Methods, systems and data structure for storing and managing information
3 in a wireless network are described wherein fixed resources in the system are
4 stored in a database in a hierarchical directory structure according to the location
5 of each fixed resource. Each level of the directory structure represents a
6 geographical area in which a fixed resource is located. The lowest level of the
7 directory structure represents the location of the smallest geographical area in
8 which a fixed resource is located, and the highest level of the directory structure
9 represents the location of the largest geographical region in which the fixed
10 resource is located.

11 Each geographical region is stored in absolute (longitude, latitude, altitude)
12 coordinates. Each fixed resource is stored in relative (x meters, y meters)
13 coordinates identifying the location of the fixed resource relative to a geographical
14 region.

15 A mobile user submits a query for the location of the nearest fixed resource
16 having certain properties. The system determines the location of the mobile user
17 and then searches the database for the requested fixed resource that is nearest to
18 the mobile user. When the fixed resource is identified, data regarding its location
19 is transmitted to the mobile user. In addition, specific directions as to how to get
20 to the location of the fixed resource from the location of the mobile user may be
21 provided.

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